

**REMARKS**

This Amendment, submitted in response to the Office Action dated October 25, 2004, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-18 and 27-47 are now all the claims pending in the application.

**I. Preliminary Matter**

Applicant is still awaiting an Interview Summary from the Examiner indicating that the finality of the present Office Action indicated at page 6 of the Office Action is incorrect, and that the Office Action Summary, indicating non-final status is correct. During a telephonic interview between the Examiner and the undersigned Applicant's representative, the Examiner indicated that the finality of the current Office Action is improper in a telephone conference of November 9, 2004. In particular, Applicant added new claims in the Amendment filed June 14, 2004 which were deemed by the Examiner to require a new search, followed by an RCE on September 14, 2004. Therefore, Applicant respectfully requests that the Examiner clearly identify the Office Action dated October 25, 2004 as non-final.

**II. Rejection of claims 16, 18, 35-36 under 35 U.S.C. § 102**

Claims 16, 18, 35-36 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Ito et al. (U.S. Patent No. 6,301,383).

**Claims 16**

The Examiner asserts that a first image input/output device is taught by the monitor gamut of Ito and that a second input/output device is taught by the printer gamut of Ito.

Claim 16 recites “correcting an edge shape of a color gamut of said second image input/output device in accordance with an edge shape of a color gamut of said first image input/output device.” The Examiner asserts this is disclosed in Figs. 14-16, col. 1- col. 2, Figs. 4, 6 and 10 and col. 6- col. 8.

Figs. 14-16 merely illustrate a difference in the gamut of a monitor with that of a printer. In Fig. 14, the gamut of the printer 64 is narrower (different from) the gamut of the monitor 63. Therefore, in the figure, the colors in hatched ranges on the monitor 63 cannot be reproduced by the printer 64. See col. 2, lines 1-4. Color signals from the monitor are converted to signals within the gamut of the printer by performing color-gamut mapping. See col. 2, lines 5-9. The gamut mapping is performed in a color space *which does not depend on a device* and is normally performed in a CIE/L\*a\*b\* color space. See col. 2, lines 11-13. However, there is no indication that an edge shape of the color gamut of the printer (second image input/output device as cited by the Examiner) is corrected according to an edge shape of a color gamut of the monitor (first image input/output device). Moreover, there is no suggestion that such correction occurs prior to color reproducing space expansion or compression as claimed. The mappings shown by Figs. 15-16 correspond to compression in conjunction with mapping between color spaces and thus does not illustrate correction before compression.

Fig. 4 illustrates increasing the amount of data by interpolation. If the number of correspondences between signals CMY and signals  $L^*a^*b$  is not sufficient, the number of data is increased by interpolating the correspondence at a predetermined point from surrounding data point to form a new data point. See col. 5, lines 25-30. There is no indication that an edge shape of the printer gamut is corrected according to an edge shape of a monitor gamut. More particularly because Fig. 4 is used to illustrate the making of a forward-direction table which does not specifically pertain to a monitor or a printer. The discussion refers to sparseness in the table population which need not conform to an edge shape. Fig. 6 illustrates the generation of a look-up table and does not describe edge correction. Fig. 10 illustrates the correspondences of *compression* coefficient and does not illustrate an event occurring before compression.

For at least the above reasons, claim 16 and its dependent claims should be deemed patentable.

#### **Claim 18**

Claim 18 recites “adjusting at least one of corresponding a hue, the chroma range and the lightness region of the color reproducing space *to transform into* by compression or extension.” The Examiner asserts that this aspect of the claim is disclosed in Figs. 6 and 7 and col. 5-col. 8. The respective aspect of Ito cited by the Examiner merely describes the generation of tables for gamut mapping. There is no indication that a hue, chroma range or lightness region of the color reproducing space is adjusted so as *to transform into* by compression or extension. Rather the

difference in lightness, hue and chroma helps establish a correct minimum error value. For at least the above reasons, claim 18 and its dependent claims should be deemed patentable.

**Claims 35 and 36**

Claims 35 and 36 describe correction of an edge shape of the color gamut of the second image input/output device (printer as cited by the Examiner). The Examiner asserts that this is disclosed in Fig. 7, col. 2, lines 44- col. 3, lines 36 and col. 5, line 51 to col. 6, lines 65. Fig. 7 discloses a flowchart for gamut mapping. At no point is there a discussion of correcting an edge shape of the printer gamut. At most it would appear that some kind of correction is performed with respect to the monitor gamut in order to minimize a gamut formula. See col. 3, lines 10-15. For at least the above reasons, claims 35 and 36 should be deemed patentable.

**III. Rejection of claim 17, 28, 31 and 33 under 35 U.S.C. § 102**

Claims 17, 28, 31 and 33 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Hoshino (U.S. Patent No. 5,317,426).

**Claims 17**

Claim 17 recites that *before* a color reproducing space is compressed or extended “correcting a non-linear portion of an edge shape of a color gamut of said first image input/output device (monitor as cited by the Examiner) or said second image input/output (printer) device in a linear manner.”

The Examiner asserts that Hoshino Figs. 13-19 and col. 14, line 35- col. 15, line 61 discloses this aspect of the claim. However, Figs. 13-19 are illustrations of the color estimation used in Hoshino in order to perform extension of a gamut. Consequently, the illustrations in Figs. 13-19 do not occur *before* a color reproducing space is compressed or extended but occurs *while* a color reproducing space is extended. See col. 19, lines 35-40.

For at least the above reasons, claim 17 and its dependent claims should be deemed patentable.

#### **Claim 28**

The Examiner states that Hoshino discloses a central color reproducing space where the first image input/output device and the second image input/output device overlap and a peripheral color reproducing space where the first image input/output device and the second image input/output device do not overlap, are both compressed or extended, citing Figs. 15 and 27, and col. 14, line 35+ and col. 2, equation 1 describing compression.

Fig. 27 illustrates the color reproduction gamut of a color CRT and a hard copy. See Col. 2, lines 10-12. Fig. 15 illustrates the movement of a target value on a straight line. Equation 1 expresses a straight line. There is no indication of compression or extension being performed in both a central color reproducing space and a peripheral color reproducing space, in Figs. 15 and 27.

Furthermore, Hoshino states that in the chroma direction, no value is corrected at the overlapped center portion between the color reproducing gamut of the input side and that of the

output side. See col. 3, lines 54-57. Therefore, Hoshino does not teach that both the central color reproducing space and the peripheral color reproducing space are both compressed or extended. Thus, claim 28 should be deemed patentable. Since claims 27 and 29 describe similar elements, they are patentable for the same reasons.

**IV. Rejection of claims 27, 29-30 and 32 under 35 U.S.C. § 103**

Claims 27, 29-30 and 32 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito et al. in view of Hoshino.

**Claims 27 and 29**

The Examiner states that Ito does not explicitly disclose compressing or expanding the central portion of the color reproducing space, and cites Hoshino to cure the deficiency. The Examiner states that Hoshino teaches compressing or extending a central portion of the color reproducing space. However, Applicant submits the contrary as indicated above with respect to claim 28.

Also, the Examiner has not provided an adequate basis for combining the references. Ito attempts to minimize a color difference perception which includes lightness, chroma and hue in combination. Col. 3, lines 15-16. Given the sensitivity of this art, the applicability of Hoshino, which seeks to preserve lightness information would appear to be contradictory to Ito. Therefore, Hoshino and Ito actually teach away from their combination with each other.

**V. Allowable Subject Matter**

Claim 1 has been allowed. Claims 2-15 depend from claim 1, therefore, are allowed. Claims 34 and 44 are also allowed.<sup>1</sup>

The Examiner has indicated that claims 37-40 contain allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. At the present time, Applicant has not rewritten claims 37-40 in independent form. Claims 41-43 are objected to but appear to be allowable if rewritten in independent form.

**VI. New claims**

Applicant has added claims 45-47 to provide a more varied scope of protection. Claims 45-47 should be deemed patentable by virtue of their dependency to claim 18 for the reasons set forth above.

**VII. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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<sup>1</sup> The Examiner's statement on the status of claim 43 appears to be in error. The claim is allowable over the art of record, but should be objected to for depending on rejected base claim 16.

AMENDMENT UNDER 37 C.F.R. § 1.111  
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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